AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Previously Presented) An isolated polynucleotide encoding a protein that has the amino acid sequence as set forth in SEQ ID NO: 2.

Claim 2 (Cancelled)

Claim 3 (Currently Amended) An isolated polynucleotide that

(1) hybridizes to the complement of a nucleic acid having the nucleotide sequence as set forth in SEQ ID No: 1 or a portion thereof under high stringency conditions ~~a stringent condition~~, and

(2) ~~that~~ encodes a protein, wherein said protein ~~is involved in~~ (a) regulates differentiation, wherein said differentiation is selected from the group consisting of formation of adventitious shoot and branching, and wherein said protein has a homeodomain-like sequence, and (b) further wherein the amino acid sequence of said protein has at least ~~20~~ 90% amino acid identity to SEQ ID NO: 2.

Claims 4-6 (Cancelled)

Claim 7 (Previously Presented) The polynucleotide according to claim 1 wherein said protein induces adventitious shoots.

Claim 8 (Previously Presented) The polynucleotide according to claim 1 wherein said protein induces branching.

Claim 9 (Previously Presented) A vector comprising the polynucleotide according to claim 1.

Claim 10 (Original) A host transformed with the vector according to claim 9.

Claim 11 (Cancelled)

Claim 12 (Currently Amended) A method for producing a protein that ~~participates in~~ regulates differentiation, wherein said differentiation is selected from the group consisting of formation of adventitious shoot and branching, said method comprising culturing or growing the host according to claim 10 and then harvesting said protein from said host.

Claim 13 (Previously Presented) The method for producing a protein according to claim 12, wherein said protein induces adventitious shoots.

Claim 14 (Original) The method for producing a protein according to claim 12, wherein said protein has an ability of inducing branching.

Claim 15 (Previously Presented) A plant or a plant cell into which the polynucleotide according to claim 1 has been introduced.

Claim 16 (Previously Presented) A method for inducing differentiation in a plant or a plant cell, wherein said differentiation is selected from the group consisting of formation of adventitious shoot and branching, said method comprising introducing the polynucleotide according to claim 1 into a plant or a plant cell and

then transcribing said polynucleotide, wherein the expression of said polynucleotide induces differentiation in a plant or plant cell.

Claim 17 (Previously Presented) A method for inducing adventitious shoot formation in a plant, said method comprising introducing the polynucleotide according to claim 1 into a plant and then transcribing said polynucleotide, wherein the expression of said polynucleotide induces adventitious shoot formation in a plant.

Claim 18 (Previously Presented) A method for inducing branching of a plant, said method comprising introducing the polynucleotide according to claim 1 into a plant and then transcribing said polynucleotide, wherein the expression of said polynucleotide induces branching in a plant.

Claim 19 (Currently Amended) The polynucleotide according to claim ~~2~~ 3, wherein said protein induces adventitious shoots.

Claim 20 (Currently Amended) The polynucleotide according to claim ~~2~~ 3, wherein said protein induces branching.

Claim 21 (Currently Amended) A vector comprising the polynucleotide according to claim ~~2~~ 3.

Claim 22 (Previously Presented) A host transformed with the vector according to claim 21.

Claim 23 (Cancelled)

Claim 24 (Currently Amended) A plant or a plant cell into which the polynucleotide according to claim ~~2~~ 3 has been introduced.

Claim 25 (Currently Amended) A method for inducing differentiation in a plant or a plant cell, wherein said differentiation is selected from the group consisting of formation of adventitious shoot and branching, said method comprising introducing the polynucleotide according to claim ~~2~~ 3 into a plant or a plant cell and then transcribing said polynucleotide, wherein the expression of said polynucleotide induces differentiation in a plant or plant cell.

Claim 26 (Currently Amended) A method for inducing adventitious shoot formation in a plant, said method comprising introducing the polynucleotide according to claim ~~2~~ 3 into a plant and then transcribing said polynucleotide, wherein the expression of said polynucleotide induces adventitious shoot formation in a plant.

Claim 27 (Currently Amended) A method for inducing branching of a plant, said method comprising introducing the polynucleotide according to claim ~~2~~ 3 into a plant and then transcribing said polynucleotide, wherein the expression of said polynucleotide induces branching in a plant.

Claim 28 (Currently Amended) The polynucleotide of claim ~~2~~ 3, wherein the number of amino acids of SEQ ID NO: 2 that have been modified are 50 or less.

Claim 29 (Previously Presented) The polynucleotide of claim 28, wherein the number of amino acids of SEQ ID NO: 2 that have been modified are 25 or less.

Claim 30 (Previously Presented) The polynucleotide of claim 29, wherein the number of amino acids of SEQ ID NO: 2 that have been modified are 10 or less.

Claims 31-34 (Cancelled)